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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,283	01/03/2006	Takashi Yoshimine	OMY-0053	4328

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EXAMINER

MILLIKIN, ANDREW R

ART UNIT	PAPER NUMBER
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2892

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/563,283	YOSHIMINE, TAKASHI	
	Examiner	Art Unit	
	Andrew Millikin	2892	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>010306</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 1, 2, 5, 6, and 8-10 are objected to because of the following informalities:
"keyboards" appears to be referring to "keys" and will be treated as such for the purposes of examination. Appropriate correction is required.

Information Disclosure Statement

2. The information disclosure statement filed 01/03/2006 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because U.S. Patent No. 6,274,273 was not published in 1987, and U.S. Patent No. 9,319,368 does not exist. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by public use of pianos with reference to Feidner (U.S. Patent Application Publication 2004/0003704, hereafter '704) and Bach (U.S. Design Patent No. D154,737). Modern pianos are known to have keyboard portions of keys, tone intervals arranged so as to repeat an arrangement of whole step, whole step, half step, whole step, whole step, whole step, and half step (the white keys C, D, E, F, G, A, and B; see '704, [0007] and Fig. 1), and a support portion that supports the keyboard portion (the piano itself) (see, for example, D154,737, Figs. 1, 2).

5. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Wedel (WO 2002/101687, hereafter '687). '687 teaches a keyboard instrument having keys and a support portion (240) and that the black and white keys of a modern piano can both be white (page 7, lines 8-16).

6. Claims 1, 3-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagasaka et al. (U.S. Patent No. 4,513,650, hereafter '650). Though means-plus-function language appears to be being used, no means for judging is explicitly provided for in the specification, and as a result, any means for judging is assumed to be acceptable. Storing means is provided in the specification in the form of computer memory (2, 3). Setting means is provided in the specification in the form of a setting panel (11). Transposing means for transposing is provided in the specification in the form of a transposition program [0026-0027]. '650 teaches a keyboard instrument

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having keys and a support portion (see abstract), including first computer memory for storing an information of sounds of a piece of music ((8); in column 1, lines 50-52 state that the sequencer can memorize a chord or melody of music); a setting panel for setting a first key information that is an information on a destination of transposition of the piece of music (5); a second computer memory for storing the first key information set by the setting panel (7); a judging means for judging a second key information that is a key of the piece of music based on the information of sounds of a piece of music stored by the first storing means (column 1, lines 59-68 & column 2, lines 1-4); and a transposition program ((2, 10), CPU and program memory switch) for transposing sounds of the piece of the music stored by the first storing means to sounds corresponding to the first key information based on the second key information judged by the judging means (column 2, lines 36-61).

'650 also teaches a first computer memory for storing an information of sounds of a piece of music and a first key information that is a key of the piece of music (8); a setting panel for setting a second key information that is an information on a destination of transposition of the piece of music (5); a second computer memory for storing the second key information set by the setting means (7); a transposition program for transposing sounds of the piece of the music stored by the first computer memory to sounds corresponding to the second key information based on the second key information stored by the second computer memory (column 2, lines 36-61).

7. Claims 1, 5 & 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Simanski (U.S. Patent No. 4,419,921, hereafter '921). '921 teaches a keyboard

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instrument having keys and a support portion (see Fig. 1) including a performance support plate that is disposed on the keys slidable in a plane where the keys are arranged (26) and that has a black keyboard underneath it (see Fig. 2).

8. Claims 1 & 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Simanski (U.S. Patent No. 4,679,482, hereafter '482). Simanski teaches a keyboard instrument having keys and a support portion (see Fig. 1) including a performance support plate (10) disposed turnable (Figs. 5, 6) so as to be attachable or detachable from the keys (column 3, lines 29-39).

9. Claims 1 & 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Stelzer (EP 71688, hereafter '688). '688 teaches a keyboard instrument having keys and a support portion (see abstract: "such as a piano"), including an automatic performance unit (3) capable of being placed on the support portion ("which can be mounted to cover the keyboard"): wherein the automatic performance unit has a storing means for an information of a piece of music (13), a plurality of key touch devices disposed so as to be touchable with each of the keyboards from thereabove (4) and a controller that controls each of the key touch devices based on the information of the piece of music (12).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1 & 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meisel (U.S. Patent No. 6,194,643, hereafter '643) in view of Brann (U.S. Patent No. 5,550,321, hereafter '321).

Claims 1 & 9: '643 teaches a keyboard instrument having keys and a support portion (Fig. 54) including a vibratable string disposed corresponding to each of the keys (this is inherent to any modern piano); a hammer that strikes a string in conjunction with a touched one of the keyboards (also inherent to any modern piano; see column 1, lines 25-48); and shifting the hammer so that it strikes different strings (column 1, lines 25-48); but does not teach a pedal mechanism for shifting the hammer by a half step. '321 teaches that using a pedal (40) to change a natural note into a flat or a sharp can help to provide a simple yet versatile system to provide a full spectrum of tones (see abstract; see also column 1, lines 57-67 & column 2, lines 1-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a pedal mechanism for shifting the hammer by a half step in order to have provided a simple yet versatile system to provide a full spectrum of tones.

Claim 10-12: '643 teaches a damper pedal (column 1, lines 25-48) and '321 teaches a pedal (40) disposed on a higher pitch sound side that can make sounds of the keyboard higher or lower by a half step (see abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used one pedal to make the sounds of the keyboard higher by a half step and another pedal to make the sounds of the keyboard lower by a half step in order to have made it easier to

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think about how to produce sharps and flats; and to have arranged the pedals in a suitable way, such as on a lower or higher pitch sound side, in order to have made it clear to a user which pedal corresponded to flat and which corresponded to sharp.

Claims 11-12: '643 teaches a pedal mechanism that shifts/turns the hammers a little to one side (be it left, towards a lower pitch sound side, or right, towards a higher pitch sound side) in a direction where the respective strings are arranged so that only a single string instead of two or three strings is struck (column 1, lines 25-48). In order to have the hammer move and hit fewer strings, it must move in a direction perpendicular to the direction the strings are arranged.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Millikin whose telephone number is 571-270-1265. The examiner can normally be reached on M-R 6:30-4 and 6:30-3 Alternating Fridays (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on 571-272-1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



MICHAEL B. CLEVELAND
SUPERVISORY PATENT EXAMINER